IN THE CLAIMS:

Please cancel Claim 9 without prejudice or disclaimer of subject matter. Please amend Claims 1 to 3, 5, 7, 8, 10, 11, 13, 15 to 18, 20 and 22 to 24, and add Claims 49 to 57 as follows. The claims, as pending in the subject application read as follows:

1. (Currently Amended) A user interface control apparatus for ~~avoiding a conflict that occurs between setup data for a predetermined object to be controlled, which are input~~ controlling a printing device having a plurality of printing functions in accordance with a user's request inputted via a user interface, comprising:

storage means for storing a part of a plurality of conflict process rules, wherein the plurality of conflict process rules define conditions for avoiding a conflict between the plurality of printing functions ~~that indicate conflict avoidance descriptions~~;

complementary rule generation means for generating a complementary rule ~~rules~~ that ~~indicate complementary conflict avoidance descriptions~~ corresponds to the rest of the plurality of conflict process rules on the basis of the part of the plurality of conflict process rules stored in said storage means;

input means for inputting the user's request via the user interface to designate a printing function corresponding to the user's request; and

update means for updating ~~the input setup data~~ a setting state of the printing function of the printing device by applying the part of the plurality of conflict process rules stored in said storage means and the complementary rule generated by said complementary rule generation means in accordance with ~~the conflict process rules and the complementary rules~~ the user's request inputted by said input means.

2. (Currently Amended) The apparatus according to claim 1, wherein when said storage means stores a ~~plurality of~~ conflict process ~~rules~~ rule for one state of one of the plurality of printing ~~function~~ functions ~~of the object to be controlled~~ having two states, and does not store any conflict process rule for the other state, said complementary rule generation means generates inverse logic of the conflict process ~~rules~~ rule for the one state as the complementary ~~rules~~ rule to the conflict process ~~rules~~ rule for the other state.

3. (Currently Amended) The apparatus according to claim 1, wherein said storage means stores the part of the plurality of conflict process rules as a conflict process rule description file.

4. (Original) The apparatus according to claim 3, wherein the conflict process rule description file is described in accordance with a predetermined markup language.

5. (Currently Amended) The apparatus according to claim 4, wherein the conflict process rule description file describes a local ~~rules~~ rule which can be applied to only a specific ~~object to be controlled~~ printing device, and a universal rule description file that describes a universal ~~rules~~ rule which can be commonly applied to a plurality of ~~objects to be controlled~~ printing devices is externally referred to.

6. (Original) The apparatus according to claim 3, wherein the conflict process rule description file contains a description of an update command of the user interface.

7. (Currently Amended) The apparatus according to claim 3, ~~wherein said complementary rule generation means~~ further ~~comprises~~ comprising means for additionally writing the ~~generated~~ complementary ~~rules~~ rule generated by said complementary rule generation means in the conflict process rule description file.

8. (Currently Amended) The apparatus according to claim 1, further comprising means for informing that the ~~setup data have~~ setting state of the printing function of the printing device has been updated upon applying the part of the plurality of conflict process rules or the complementary ~~rules~~ rule by said update means.

9. (Cancelled)

10. (Currently Amended) A user interface control method for controlling a printing device having a plurality of printing functions in accordance with a user's request inputted ~~for avoiding a conflict that occurs between setup data for a predetermined object to be controlled, which are input~~ via a user interface, comprising:

the complementary rule generation step of referring to a conflict process rule description file that describes a part of a plurality of conflict process rules ~~that indicate conflict avoidance descriptions~~, wherein the plurality of conflict process rules define conditions for avoiding a conflict between the plurality of printing functions, and generating a complementary ~~rules~~ rule that ~~indicate complementary conflict avoidance descriptions~~ corresponds to the rest of the plurality of conflict process rules on the basis of the part of the plurality of conflict process rules;

the input step of inputting the user's request via the user interface to designate a printing function corresponding to the user's request; and

the update step of updating ~~the input setup data~~ a setting state of the printing function of the printing device by applying the part of the plurality of conflict process rules and the complementary rule in accordance with ~~the conflict process rules and the complementary rules~~ the user's request inputted in said input step.

11. (Currently Amended) The method according to claim 10, wherein the complementary rule generation step includes the step of generating, when the conflict process rule description file describes a ~~plurality of~~ conflict process ~~rules~~ rule for one state of one of the plurality of printing functions ~~function of the object to be controlled~~ having two states, and does not describe any conflict process rule for the other state, inverse logic of the conflict process ~~rules~~ rule for the one state as the complementary ~~rules~~ rule to the conflict process ~~rules~~ rule for the other state.

12. (Original) The method according to claim 10, wherein the conflict process rule description file is described in accordance with a predetermined markup language.

13. (Currently Amended) The method according to claim 12, wherein the conflict process rule description file describes a local ~~rules~~ rule which can be applied to only a specific ~~object to be controlled~~ printing device, and a universal rule description file that describes a universal ~~rules~~ rule which can be commonly applied to a plurality of ~~objects to be controlled~~ printing devices is externally referred to.

14. (Original) The method according to claim 10, wherein the conflict process rule description file contains a description of an update command of the user interface.

15. (Currently Amended) The method according to claim 10, ~~wherein the complementary rule generation step~~ further ~~comprises~~ comprising the step of additionally writing the ~~generated~~ complementary ~~rules~~ rule generated in said complementary rule generation step in the conflict process rule description file.

16. (Currently Amended) The method according to claim 10, further comprising the step of informing that the ~~setup data have~~ setting state of the printing function of the printing device has been updated upon applying the part of the plurality of conflict process rules or the complementary ~~rules~~ rule in said update step.

17. (Currently Amended) A program for making a computer implement a user interface control method for controlling a printing device having a plurality of printing functions in accordance with a user's request inputted ~~for avoiding a conflict that occurs between setup data for a predetermined object to be controlled, which are input~~ via a user interface, comprising:

a program code of the complementary rule generation step of referring to a conflict process rule description file that describes a part of a plurality of conflict process rules ~~that indicate conflict avoidance descriptions~~, wherein the plurality of conflict process rules define conditions for avoiding a conflict between the plurality of printing functions, and generating a complementary ~~rules~~ rule that ~~indicate complementary conflict avoidance~~

~~descriptions~~ corresponds to the rest of the plurality of conflict process rules on the basis of the part of the plurality of conflict process rules;

a program code of the input step of inputting the user's request via the user interface to designate a printing function corresponding to the user's request; and

a program code of the update step of updating ~~the input setup data~~ a setting state of the printing function of the printing device by applying the part of the plurality of conflict process rules and the complementary rule in accordance with ~~the conflict process rules and the complementary rules~~ the user's request inputted in said input step.

18. (Currently Amended) The program according to claim 17, wherein the program code of the complementary rule generation step includes the step of generating, when the conflict process rule description file describes a ~~plurality of~~ conflict process ~~rules~~ rule for one state of one of the plurality of printing functions ~~of the object to be controlled~~ having two states, and does not describe any conflict process rule for the other state, inverse logic of the conflict process ~~rules~~ rule for the one state as the complementary ~~rules~~ rule to the conflict process ~~rules~~ rule for the other state.

19. (Original) The program according to claim 17, wherein the conflict process rule description file is described in accordance with a predetermined markup language.

20. (Currently Amended) The program according to claim 19, wherein the conflict process rule description file describes a local ~~rules~~ rule which can be applied to only a specific ~~object to be controlled~~ printing device, and a universal rule description file

that describes a universal ~~rules~~ rule which can be commonly applied to a plurality of ~~objects to be controlled~~ printing devices is externally referred to.

21. (Original) The program according to claim 17, wherein the conflict process rule description file contains a description of an update command of the user interface.

22. (Currently Amended) The program according to claim 17, ~~wherein the complementary rule generation step~~ further ~~comprises~~ comprising the step of additionally writing the ~~generated~~ complementary ~~rules~~ rule generated in said complementary rule generation step in the conflict process rule description file.

23. (Currently Amended) The program according to claim 17, further comprising a program code of the step of informing that the ~~setup data have~~ setting state of the printing function of the printing device has been updated upon applying the part of the plurality of conflict process rules or the complementary ~~rules~~ rule in said update step.

24. (Currently Amended) A storage medium that stores a program for making a computer implement a user interface control method for controlling a printing device having a plurality of printing functions in accordance with a user's request inputted ~~for avoiding a conflict that occurs between setup data for a predetermined object to be controlled, which are input~~ via a user interface, ~~storing~~ said program comprising:

~~a conflict process rule description file that describes conflict process rules that indicate conflict avoidance descriptions;~~

a program code of the complementary rule generation step of referring to a conflict process rule description file that describes a part of a plurality of conflict process rules, wherein the plurality of conflict process rules define conditions for avoiding a conflict between the plurality of printing functions, and generating a complementary ~~rules~~ rule that ~~indicate complementary conflict avoidance descriptions~~ corresponds to the rest of the plurality of conflict process rules on the basis of the part of the plurality of conflict process rules;

a program code of the input step of inputting the user's request via the user interface to designate a printing function corresponding to the user's request; and

a program code of the update step of updating ~~the input setup data~~ a setting state of the printing function of the printing device by applying the part of the plurality of conflict process rules and the complementary rule in accordance with ~~the conflict process rules and the complementary rules~~ the user's request inputted in said input step.

25. (Withdrawn) An information processing apparatus comprising:

means for executing a basic process for matching setup conditions with each other;

generation means for generating complementary process rules that complement the basic process so-as to match the setup conditions; and

control means for matching the setup conditions in accordance with the basis process and complementary process rules, and determining control parameters based on the conditions.

26. (Withdrawn) The apparatus according to claim 25, wherein said control means determines the presence/absence of a conflict between setup conditions, which are input from input means for inputting the setup conditions, and applies the basic process and the complementary process rules to determine control parameters if any conflict is detected.

27. (Withdrawn) The apparatus according to claim 25, further comprising:

interface means for visualizing the setup conditions; and

display control means for displaying the conditions determined by said control means on said interface means.

28. (Withdrawn) The apparatus according to claim 27, wherein said display control means informs that the setup conditions have been changed upon applying the basic process and the complementary process rules by said control means.

29. (Withdrawn) An image forming apparatus comprising:

an information processing apparatus cited in claim 25; and

image forming means for determining control parameters which are input to said information processing apparatus and are used to form an image, and forming image information on the basis of the determined control parameters.

30. (Withdrawn) The apparatus according to claim 29, wherein said image forming apparatus includes a printer and facsimile.

31. (Withdrawn) An information processing method comprising:

the step of executing a basic process for matching setup conditions with each other;

the generation step of generating complementary process rules that complement the basic process so as to match the setup conditions; and

the control step of matching the setup conditions in accordance with the basis process and complementary process rules, and determining control parameters based on the conditions.

32. (Withdrawn) The method according to claim 31, wherein the control step includes the step of determining the presence/absence of a conflict between setup conditions, which are input from the input step of inputting the setup conditions, and applying the basic process and the complementary process rules to determine control parameters if any conflict is detected.

33. (Withdrawn) The method according to claim 31, further comprising:

the interface step of visualizing the setup conditions; and

the display control step of displaying the conditions determined by the control step in the interface step.

34. (Withdrawn) The method according to claim 33, wherein the display control step includes the step of informing that the setup conditions have been changed upon applying the basic process and the complementary process rules by the control step.

35. (Withdrawn) A program for making a computer implement an information processing method, comprising:

a module for executing a basic process for matching setup conditions with each other;

a generation module for generating complementary process rules that complement the basic process so as to match the setup conditions; and

a control module for matching the setup conditions in accordance with the basis process and complementary process rules, and determining control parameters based on the conditions.

36. (Withdrawn) The program according to claim 35, wherein said control modules determines the presence/absence of a conflict between setup conditions, which are input from an input module for inputting the setup conditions, and applies the basic process and the complementary process rules to determine control parameters if any conflict is detected.

37. (Withdrawn) The program according to claim 35, further comprising:

an interface module for visualizing the setup conditions; and

a display control module for displaying the conditions determined by said control module in said interface module.

38. (Withdrawn) The program according to claim 37, wherein said display control module informs that the setup conditions have been changed upon applying the basic process and the complementary process rules by said control module.

39. (Withdrawn) A computer readable storage medium that stores a program module used to make a computer implement an information processing method, said program module comprising:

a module for executing a basic process for matching setup conditions with each other;

a generation module for generating complementary process rules that complement the basic process so as to match the setup conditions; and

a control module for matching the setup conditions in accordance with the basis process and complementary process rules, and determining control parameters based on the conditions.

40. (Withdrawn) A user interface control apparatus for avoiding a conflict that occurs due to setup information, which is input via a user interface that can input setup information for a predetermined object to be controlled, comprising:

storage means for storing conflict process rules indicating conflict avoidance strategies; and

update means for updating related setup information by applying the conflict process rules on the basis of the input setup information,

said update means comprising:

detection means for detecting setup information to be changed by applying the conflict process rules; and

setup information change means for changing only the detected setup information.

41. (Withdrawn) The apparatus according to claim 40, further comprising informing means for informing that the setup information has been changed by said setup information change means.

42. (Withdrawn) The apparatus according to claim 40, wherein the object to be controlled is an image forming apparatus.

43. (Withdrawn) A user interface control method for avoiding a conflict that occurs due to setup information, which is input via a user interface that can input setup information for a predetermined object to be controlled, comprising:

the detection step of referring to a conflict process rule description file that describes conflict process rules indicating conflict avoidance strategies, and detecting setup information to be changed by applying the conflict process rules; and

the setup information change step of changing only the detected setup information.

44. (Withdrawn) The method according to claim 43, further comprising the informing step of informing that the setup information has been changed in the setup information change step.

45. (Withdrawn) The method according to claim 43, wherein the conflict process rule description file can contain a description of a control command which restricts a change in predetermined setup information, and the detection step comprises the step of

restricting a change in corresponding setup information in accordance with a control command read out from the conflict process rule description file.

46. (Withdrawn) A program for making a computer implement a user interface control method for avoiding a conflict that occurs due to setup information, which is input via a user interface that can input setup information for a predetermined object to be controlled, comprising:

a program code of the detection step of referring to a conflict process rule description file that describes conflict process rules indicating conflict avoidance strategies, and detecting setup information to be changed by applying the conflict process rules; and

a program code of the setup information change step of changing only the detected setup information.

47. (Withdrawn) The program according to claim 46, further comprising a program code of the informing step of informing that the setup information has been changed in the setup information change step.

48. (Withdrawn) A storage medium that stores a program for making a computer implement a user interface control method for avoiding a conflict that occurs due to setup information, which is input via a user interface that can input setup information for a predetermined object to be controlled, storing:

a program code of the detection step of referring to a conflict process rule description file that describes conflict process rules indicating conflict avoidance strategies, and detecting setup information to be changed by applying the conflict process rules; and

a program code of the setup information change step of changing only the detected setup information.

49. (New) The apparatus according to claim 1, further comprising user interface control means for controlling the user interface to change a display status of a display item of the setting state of the printing function of the printing device updated by said update means.

50. (New) The apparatus according to claim 49, wherein the change of the display status of the display item includes grayout or display/non-display of the display item.

51. (New) The apparatus according to claim 1, wherein the conflict process rule defines a condition for avoiding a conflict between at least two printing functions among Collate printing function, Group printing function, Staple finishing function and Booklet printing function.

52. (New) The method according to claim 10, further comprising the step of controlling the user interface to change a display status of a display item of the setting state of the printing function of the printing device updated in said update step.

53. (New) The method according to claim 52, wherein the change of the display status of the display item includes grayout or display/non-display of the display item.

54. (New) The method according to claim 10, wherein the conflict process rule defines a condition for avoiding a conflict between at least two printing functions among Collate printing function, Group printing function, Staple finishing function and Booklet printing function.

55. (New) The program according to claim 17, further comprising a program code of the step of controlling the user interface to change a display status of a display item of the setting state of the printing function of the printing device updated in said update step.

56. (New) The program according to claim 55, wherein the change of the display status of the display item includes grayout or display/non-display of the display item.

57. (New) The program according to claim 17, wherein the conflict process rule defines a condition for avoiding a conflict between at least two printing functions among Collate printing function, Group printing function, Staple finishing function and Booklet printing function.